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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,933	09/11/2003	Takuya Ishida	81863.0021	5059
26021	7590	11/30/2005		
HOGAN & HARTSON L.L.P. 500 S. GRAND AVENUE SUITE 1900 LOS ANGELES, CA 90071-2611			EXAMINER ADDISU, SARA	
			ART UNIT	PAPER NUMBER
			3722	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/659,933	Applicant(s) ISHIDA, TAKUYA	
	Examiner Sara Addisu	Art Unit 3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 9, 14-19 and 21-23 is/are allowed.
- 6) ☒ Claim(s) 1, 3-7, 10, 12 and 20 is/are rejected.
- 7) ☒ Claim(s) 11 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The objection to the Specification (i.e. The application papers were are objected to because the copy provided was not very clear) is withdrawn due to the replacement Specification submitted on 8/22/05.

Response to Arguments

Applicant's arguments, see page 9, lines 6-11, 16-19 and 21-26, filed 8/8/05, with respect to the rejection(s) of claim(s) 1 and 6 under 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art reference.

The objected to Claim 10 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims has been withdrawn. A new ground(s) of rejection is made in view of newly found prior art reference.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Lawrence J. McClure on 8/18/05.

The application has been amended as follows:

Claim 2 has been cancelled and included in Claim 1.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show: R, R1, R2 and R3 as described in the specification (see Page 9, line 23 to page 10, line 15). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the

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appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

- The abstract of the disclosure is objected to because it is in claim format and contains legal phraseology, e.g. "comprises".
- The abstract of the disclosure is also objected to because it is in claim format
- The disclosure is objected to because of the following informalities: references R, R1, R2 and R3 (see Page 9, line 23 to page 10, line 15).

Appropriate correction is required. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3-5, 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niebauer (U.S. Patent No. 5,122,017), in view of Toyose (JP 11-277307).

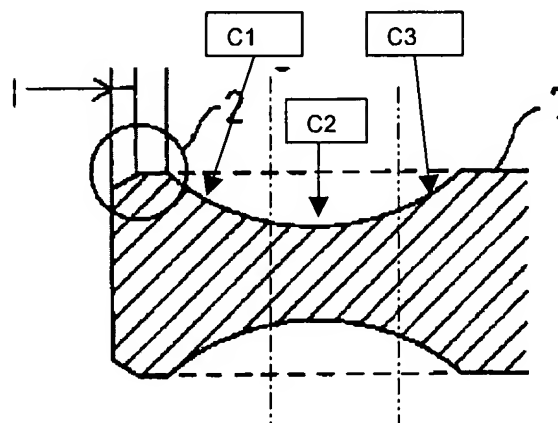
Niebauer teaches a double-sided cutting insert (2) having top and bottom (principal) rake faces and seating surfaces (6 & 8), side surfaces (12), peripheral cutting edge (22), land area (24), plateau (central portion) (62) with protrusions extend towards the corners as well as midway between the corners and a floor/recess (40) located between the land and the plateau (central portion) ('017, Figure 2 and Col. 2, lines 28-36) ['017, Col. 4, lines 56-57 teach double sided insert). Niebauer also teaches in Figure 6, top surface of plateau (and also protrusion) being planar that serve as contact surface when attached to tool holder. Regarding claim 3, Niebauer teaches in figure 2, protrusion forming an acute angle with the plane of the distal end of the protrusion. Regarding claims 5, measurement of the lengths L1 & L2 of figure 2 (L1 & L2 defined the same as Specification), length L2 measures 43 mm while length L1 measures 52

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mm giving a ratio of .83 (43mm/52mm). Regarding claims 7, refer to figure 6, curved floor/recess 40. Regarding claim 20, refer to figure 4, where Niebauer teaches protrusion sloping downward followed by upwardly sloping wall (32) towards land area.

However, Niebauer fails to teach land surface that is planar and serve as contact surface when attached to tool holder.

Toyose teaches a double-sided insert having a planar seat (7) and land (4) with a straight part (9) that is on the same plane (i.e. same height) as the seat (7) (JP 11-277307, figures 2 and abstract). Both the straight part (9) of the land and seat (7) serve as contact surface when attached to the tool holder (JP 11-277307, figure 3). Toyose also teaches a recess (5) having a first curve (c1), second curve (c2) and third curve (c3) (see figure below).



Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Niebauer's invention such that land has a portion that is flat and at the same height as the top surface of plateau (with protrusion),

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as taught by Toyose for the purpose of having the added support to significantly reduce chatter and thus improve the surface finish of the workpiece being machined. It would have also been obvious to one of ordinary skill in the art at the time of the invention was made to modify Niebauer's invention such that the recess has curves as taught by Toyose for the purpose of assisting the flow of chips from the workpiece.

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Niebauer (U.S. Patent No. 5,122,017), in view of in view of Toyose (JP 11-277307) and further in view of Wiman et al. (U.S. Patent No. 5,897,272).

The modified device of Niebauer teaches a double-sided cutting insert, as set forth in the above rejection.

However, the modified device of Niebauer fails to teach width of the land surface being 0.2 – 0.5 mm.

Wiman et al. teaches a cutting insert having a primary land with width (a') of 0.1 – 0.8 mm (see figure 2 and Col. 2, lines 64-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Niebauer's invention, such the insert's land area has a width that is in the range of 0.1 – 0.8 mm as taught by Wiman et al. for the purpose of providing work piece with desired quality.

3. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niebauer (U.S. Patent No. 5,122,017), in view of in view of Toyose (JP 11-277307) and further in view of Wiman et al. (U.S. Patent No. 5,743,681).

The modified device of Niebauer teaches a double-sided cutting insert as set forth in the above rejection.

However, the modified device of Niebauer fails to teach the insert having a linkage portion that connects at least one of the protrusions and the side edge of the land surface.

Wiman et al. teaches an insert having a protrusion (11) that extends towards the land surface (6). Wiman et al. also teaches a linkage portion (13) that connects at least one of said protrusions (11) and the side edge of said land surface (6) ('681, figure 6 and Col. 3, lines 8-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Niebauer's invention, such the insert has a protrusion configuration comprising a linkage portion that connects the protrusions and the side edge of said land surface, as taught by Wiman et al. for the purpose of carrying the chip away from the workpiece ('681, Col. 3, lines 27-35).

Allowable Subject Matter

Claims 11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 8, 9, 14-19 and 21-23 are allowed.

The closest prior art to the instant invention is Niebauer (U.S. Patent No. 5,122,017).

Niebauer teaches a double-sided cutting insert (2) having top and bottom (principal) rake faces and seating surfaces (6 & 8), side surfaces (12), peripheral cutting edge (22), land area (24), plateau (central portion) (62) with protrusions extend towards the corners as well as midway between the corners and a floor/recess (40) located between the land and the plateau (central portion) ('017, Figure 2 and Col. 2, lines 28-36) ['017, Col. 4, lines 56-57 teach double sided insert). Niebauer also teaches in Figure 6, top surface of plateau (and also protrusion) being planar that serve as contact surface when attached to tool holder. Although Niebauer fails to teach a land surface that is planar and serve as contact surface (along with top surface of the protrusion) when attached to tool holder, it could be modified by Toyose (JP 11-277307) which teaches a double-sided insert having a planar seat (7) and land (4) with a straight part (9) that is on the same plane (i.e. same height) as the seat (7) (JP 11-277307, figures 2

and abstract). Both the straight part (9) of the land and seat (7) serve as contact surface when attached to the tool holder (JP 11-277307, figure 3).

However, there is no suggestion in Niebauer's teaching to provide the insert with a ratio of areas of the central surface and said land surface in the principal surface that ranges from 50 to 90% (Claim 8). There is also no suggestion in Niebauer's teaching to provide a distance of 0.5 mm or less between the distal end of the protrusion, that is located at the same height as the central surface and the land surface or a height of the distal end of said protrusion decreasing by an angle in a the range from 10 to 60 degrees toward said land surface (Claim 9). Additionally, there is no suggestion in Niebauer's teaching to provide the insert's recess with dimensions in a range from 0.1 mm to 0.6 mm in recess depth (h1), from 0.7 mm to 2 mm in recess width (w), from 0.3 mm to 1.5 mm in width (w1) from the land surface side to the bottom of the recess, and from 0.5 mm to 1.7 mm in width (w2) from the bottom of said recess to said central surface (Claim 14).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SA

11/22/05



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